

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A data receiver comprising:
a limiting amplifier comprising a plurality of amplifier stages; and
a peak detector measuring a voltage level of an input to said limiting amplifier, an input to said peak detector being connected directly to an input of a first one of said plurality of amplifier stages of said limiting amplifier;
wherein a mismatch in impedance of transmission lines used between said input to said peak detector and said input of said first one of said plurality of amplifier stages of said limiting amplifier is minimized such that said peak detector appears as a load with insignificant capacitance with respect to an ~~extremely high~~ at least an OC192 data rate of a signal on said input.
2. (original) The data receiver according to claim 1, wherein:
an impedance of said transmission line is between 33 ohms and 75 ohms throughout a frequency range of operation.
3. (currently amended) The data receiver according to claim 2, wherein:
said frequency range of operation is between 10 ~~MHz~~ GHz and 12 GHz.
4. (original) The data receiver according to claim 1, further comprising:
a latch circuit connected to an output of said peak detector.

5. (original) The data receiver according to claim 4, wherein:
said peak detector and said latch circuit form a loss of signal circuit
detecting a loss of signal input to said limiting amplifier.

6. (canceled)

7. (cancelled)

8. (currently amended) ~~The data receiver according to claim 1,~~
~~further comprising:~~

A data receiver comprising:

a limiting amplifier comprising a plurality of amplifier stages;

a peak detector measuring a voltage level of an input to said
limiting amplifier, an input to said peak detector being connected directly to an
input of a first one of said plurality of amplifier stages of said limiting amplifier;
and

a bias generator used to bias both said input to said peak detector
as well as said input to said first one of said plurality of amplifier stages.

wherein a mismatch in impedance of transmission lines used
between said input to said peak detector and said input of said first one of said
plurality of amplifier stages of said limiting amplifier is minimized such that said
peak detector appears as a load with insignificant capacitance with respect to an
extremely high data rate of a signal on said input.

9. (currently amended) A method of measuring a signal having an extremely high data rate of at least ~~2.5 Gb/s~~ OC192 equivalent input to a limiting amplifier, comprising:

minimizing a mismatch of impedance between an input to a first stage of said limiting amplifier, and transmission leads connected between said input to said first stage of said limiting amplifier and an input to a peak detector such that said peak detector appears as a load with insignificant capacitance with respect to an extremely high data rate of a signal on said input; and

directly measuring through an input to said peak detector connected directly to a first stage of said limiting amplifier a signal having a data rate of at least ~~2.5 Gb/s~~ OC192 equivalent being input to said first stage of said limiting amplifier.

10. (currently amended) The method of measuring a signal having an extremely high data rate of at least ~~2.5 Gb/s~~ OC192 equivalent input to a limiting amplifier according to claim 9, wherein:

an impedance of said transmission line is maintained between 33 ohms and 75 ohms throughout a frequency range of operation.

11. (currently amended) The method of measuring a signal having an extremely high data rate of at least ~~2.5 Gb/s~~ OC192 equivalent input to a limiting amplifier according to claim 10, wherein:

said frequency range of operation is between 10 MHz GHz and 12 GHz.

12. (currently amended) ~~The method of measuring a signal having an extremely high data rate of at least 2.5 Gb/s input to a limiting amplifier according to claim 9, further comprising:~~

A method of measuring a signal having an extremely high data rate of at least 2.5 Gb/s input to a limiting amplifier, comprising:

minimizing a mismatch of impedance between an input to a first stage of said limiting amplifier, and transmission leads connected between said input to said first stage of said limiting amplifier and an input to a peak detector such that said peak detector appears as a load with insignificant capacitance with respect to an extremely high data rate of a signal on said input;

biasing said peak detector bias with a same bias used to bias said first stage of said limiting amplifier; and

directly measuring through an input to said peak detector connected directly to a first stage of said limiting amplifier a signal having a data rate of at least 2.5 Gb/s being input to said first stage of said limiting amplifier.

13. (canceled)

14. (canceled)

15. (currently amended) The method of measuring a signal having an extremely high data rate of at least ~~2.5 Gb/s~~ OC192 equivalent input to a limiting amplifier according to claim 9, further comprising:

latching an output of said peak detector.

16. (currently amended) The method of measuring a signal having an extremely high data rate of at least ~~2.5 Gb/s~~ OC192 equivalent input to a limiting amplifier according to claim 15, wherein:

said latching provides a loss of signal indication relating to said signal input to said first stage of said limiting amplifier.

17. (currently amended) Apparatus for measuring a signal having an extremely high data rate of at least ~~2.5 Gb/s~~ OC192 equivalent input to a limiting amplifier, comprising:

means for minimizing a mismatch of impedance between an input to a first stage of said limiting amplifier, and transmission leads connected between said input to said first stage of said limiting amplifier and an input to a peak detector using differential transmission lines such that said peak detector appears as a load with insignificant capacitance with respect to an extremely high data rate of a signal on said input; and

means for directly measuring through an input to said peak detector connected directly to a first stage of said limiting amplifier a signal having a data rate of at least ~~2.5 Gb/s~~ OC192 equivalent being input to said first stage of said limiting amplifier.

18. (currently amended) The apparatus for measuring a signal having an extremely high data rate of at least ~~2.5 Gb/s~~ OC192 equivalent input to a limiting amplifier according to claim 17, wherein:

an impedance of said transmission line is between 33 ohms and 75 ohms throughout a frequency range of operation.

19. (currently amended) The apparatus for measuring a signal having an extremely high data rate of at least ~~2.5 Gb/s~~ OC192 equivalent input to a limiting amplifier according to claim 18, wherein:

said frequency range of operation is between 10 MHz GHz and 12 GHz.

20. (currently amended) ~~The apparatus for measuring a signal having an extremely high data rate of at least 2.5 Gb/s input to a limiting amplifier according to claim 17, further comprising:~~

Apparatus for measuring a signal having an extremely high data rate of at least 2.5 Gb/s input to a limiting amplifier, comprising:

means for minimizing a mismatch of impedance between an input to a first stage of said limiting amplifier, and transmission leads connected between said input to said first stage of said limiting amplifier and an input to a peak detector using differential transmission lines such that said peak detector appears as a load with insignificant capacitance with respect to an extremely high data rate of a signal on said input;

means for biasing said peak detector bias with a same bias used to bias said first stage of said limiting amplifier; and

means for directly measuring through an input to said peak detector connected directly to a first stage of said limiting amplifier a signal having a data rate of at least 2.5 Gb/s being input to said first stage of said limiting amplifier.

Kindly add the following new claims:

21. (new) The data receiver according to claim 8, wherein:
an impedance of said transmission line is between 33 ohms and 75 ohms throughout a frequency range of operation.

22. (new) The data receiver according to claim 8, wherein:
said frequency range of operation is between 10 GHz and 12 GHz.

23 (new) The data receiver according to claim 8, wherein
a latch circuit connected to an output of said peak detector.

24 (new) The data receiver according to claim 23, wherein said peak detector and said latch circuit form a loss of signal circuit detecting a loss of signal input to said limiting amplifier.

25. (new) The method of measuring a signal having an extremely high data rate according to claim 12, further comprising:
latching an output of said peak detector.

26. (new) The method of measuring a signal having an extremely high data rate according to claim 25, wherein:
said latching provides a loss of signal indication relating to said signal input to said first stage of said limiting amplifier.

27. (new) The apparatus for measuring a signal having an extremely high data according to claim 20, further comprising:
means for latching an output of said peak detector.

28. (new) The apparatus for measuring a signal having an extremely high data rate according to claim 27, wherein:
said means for latching provides a loss of signal indication relating to said signal input to said first stage of said limiting amplifier.